Antec
The Power of You

Quiet computing

Sonata Solo / Solo White / Designer 500 / Plus 550

User's Manual

Manuel de l'utilisateur
Anwenderhandbuch
Manuale per l'operatore
Manual del usuario
取扱説明書

At Antec, we continually refine and improve our products to ensure the highest quality. It's possible that your new case will differ slightly from the descriptions in this manual. This isn't a problem; it's simply an improvement. As of the date of publication, all features, descriptions, and illustrations in this manual are correct.

Disclaimer

This manual is intended only as a guide for Antec's Computer Enclosures. For more comprehensive instructions on installing the motherboard and peripherals, please refer to the user's manuals that come with those components.

Sonata Solo / Solo White / Designer 500 / Plus 550

SUPER QUIET MINI TOWER CASES
USER'S MANUAL

The Sonata Solo / Solo White / Designer 500 / Plus 550 cases are designed with Quiet Computing™ in mind. Many unique design features help make this case quiet and cool.

1. Solid steel structure (1.0 mm thick steel).
2. Two-layer (steel/plastic) side and top panels to deaden noise.
3. Dual hard drive mounting system for maximum noise reduction.
4. Quiet 120mm TriCool™ rear fan.
5. Dual front 92mm fan mounts for spot cooling hard drives.
6. Intake vents along the sides of the front bezel to prevent noise from leaking toward the user.
7. Built-in cable organizer to tuck away extra cables behind the hard drive cage.
8. The Sonata Designer 500 comes with the environmentally friendly EarthWatts 500 power supply unit (PSU), which meets the 80PLUS® specification.
9. The Sonata Plus 550 comes with the NeoPower 550 PSU with better power distribution and modular cabling.
10. The Sonata Solo / Solo White comes without any PSU, which allows you to add the Antec PSU of your choice.

Setting Up

1. Place the case upright on a flat, stable surface.
2. Loosen the thumbscrews from the left side panel. Remove it by swinging it out. **Note:** Do not use your fingernail to pry or lift the panels.
3. Inside the case you should see the PSU, some wiring with marked connectors (USB, PWR etc.), an installed I/O panel, a power cord, a plastic bag containing modular PSU output cables (for Sonata Plus 550 model), a plastic bag with more hardware (screws, brass standoffs, specialty screws, etc.), and six drive rails.
4. Three plastic tabs on the left side of the bezel fasten the front bezel to the metal chassis. Release the tabs from the top down to release the bezel.
5. Swing open the bezel about 45° and gently lift the bezel upward. The front bezel will come off easily. Set the bezel in a safe place.

Installing the Motherboard

This manual does not cover CPU, RAM, or expansion card installation. Please consult your motherboard manual for specific mounting instructions and troubleshooting.

1. Make sure you have the correct I/O panel for your motherboard. If the panel provided with the case isn't suitable, please contact your motherboard manufacturer for the correct I/O panel.
2. Line up your motherboard with the standoff holes, and remember which holes are lined up. Not all motherboards will match with all the provided holes; this is normal, and won't affect functionality. (In other words, there will likely be extra holes.)
3. Remove your motherboard by lifting it up.
4. Screw the brass standoffs into the threaded holes that line up with your motherboard. Do not over-tighten the standoffs. Some standoffs may be pre-installed for your convenience.
5. Place your motherboard on the brass standoffs.
6. Fasten your motherboard to the standoffs with the provided Philips-head screws. Your motherboard is now installed.

Connecting the Front I/O

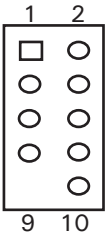
1. Connect the Reset switch (labeled RESET SW) to the motherboard at the RST connector. Polarity (positive and negative) does not matter for switches.
2. Power Switch (labeled POWER SW) connects to the PWR connector on the motherboard.
3. Connect the Power LED (labeled POWER LED) to your motherboard. For LEDs, colored wires are positive (+). White or black wires are negative (–). If the LED does not light up when the system is powered on, try reversing the connection. For more info on connecting LEDs to your motherboard, see your motherboard manual.
4. Hard Drive LED (labeled HDD LED) connects to the hard drive activity header.

Connecting the USB Ports

You will find a single 10-pin connector on a cable attached to the front USB ports. This is an Intel® standard connector that is keyed so that it can't be accidentally reversed when connected to a proper Intel® standard motherboard header. Connect the 10-pin connector to the motherboard headers so that the blocked pin fits over the missing header pin.

Note: Please check the motherboard manual for the USB header pin layout and make sure it matches the table below. If it does not match this Intel® standard, please visit Antec's web store at http://www.antec.com/StoreFront.bok and search for part number 30095 to order a USB Internal Adapter Cable. This adapter will allow you to connect the front USB to your motherboard on a pin-by-pin basis.

Motherboard USB Pin Layout



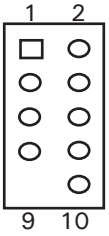
Pin	Signal Names	Pin	Signal Names
1	USB Power 1	2	USB Power 2
3	Negative Signal 1	4	Negative Signal 2
5	Positive Signal 1	6	Positive Signal 2
7	Ground 1	8	Ground 2
9	Key (No Connection)	10	Empty Pin

Connecting the IEEE 1394 (FireWire®, i.Link®) Port

You will find a single 10-pin connector on a cable attached to the front IEEE 1394 connection. This is an Intel standard connector, which is keyed so that it can't be accidentally reversed as long as it is connected to a proper Intel standard motherboard header. Connect the 10-pin connector to your motherboard header so that the blocked pin fits over the missing header pin.

Note: Please check your motherboard manual for your IEEE 1394 header pin layout and make sure it matches the attached table. If you intend to connect the front FireWire port to an IEEE 1394 add-on card that comes with an external-type IEEE1394 connector, please call Antec customer service at (800) 22ANTEC (North America) or +31 (0) 10 462-2060 (Europe) to buy an adapter. This adapter will allow you to connect the front IEEE 1394 port to the external connector.

Motherboard FireWire Pin Layout



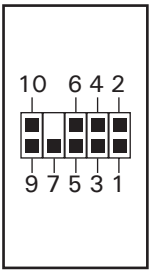
Pin	Signal Names	Pin	Signal Names
1	TPA+	2	TPA–
3	Ground	4	Ground
5	TPB+	6	TPB–
7	+12V (Fused)	8	+12V (Fused)
9	Key (No Pin)	10	Ground

CONNECTING THE AUDIO PORTS (AC' 97 and HDA)

There is an Intel standard 10-pin AC' 97 connector and an Intel 10-pin HDA (High Definition Audio) connector. You can connect either of them to your motherboard depending on the specification of the motherboard. See instruction below:

Note: Please check your motherboard manual for your audio header pin layout and make sure it matches the table below. Even if your system supports both audio standards, you may only connect one connector not both.

Pin Assignment for Audio Ports (HDA and AC'97)



Pin	Signal Names (HDA)	Pin	Signal Names (AC'97)
1	MIC2 L	1	MIC In
2	AGND	2	GND
3	MIC2 R	3	MIC Power
4	AVCC	4	NC
5	FRO-R	5	Line Out (R)
6	MIC2_JD	6	Line Out (R)
7	F_IO_SEN	7	NC
8	Key (no pin)	8	Key (no pin)
9	FRO-L	9	Line Out (L)
10	LINE2_JD	10	Line Out (L)

EarthWatts™ 500 Power Supply (Sonata Designer 500 Model Only)

Sonata Designer 500 comes with a 500 Watt EarthWatts PSU which is built to be compatible with the ATX12V version 2.2 specification. This PSU is very efficient, which reduces power consumption by up to 25% and saves you money on your electricity bill. EarthWatts power supplies have achieved 80 PLUS® Certification, the latest independent standard in PSU efficiency. In addition EarthWatts includes a variety of protective circuitry: OPP (over power protection), OVP (Over Voltage Protection), and SCP (Short Circuit Protection).

EarthWatts also includes Universal Input with Active Power Factor Correction (PFC). Universal Input allows you to connect your Antec EarthWatts PSU to any AC power outlet between 100～240V without having to worry about setting a voltage switch. Active PFC reduces electrical waste by improving the power factor value to the PSU, helping the power plant to provide power to users more efficiently.

Installation:

This PSU is backwards compatible to previous ATX specifications. To make sure you connect your PSU properly, please refer to the user manual supplied with your motherboard and peripherals before connecting the EarthWatts to any of your devices.

Picture 2

For 24-pin motherboards

Picture 3

For 20-pin motherboards

1. Connect the 24-pin main power connector. If your motherboard uses a 20-pin connector, detach the 4-pin attachment on the 24-pin power connector (see pictures 2 and 3). **Note:** the detachable 4-pin section cannot be used in place of the 4-pin +12V connector.
2. Connect the 4-pin or 8-pin +12V connector as needed for your motherboard.
3. You will find 2 cables with 4-pin Molex connectors. Connect this connector to any of your peripherals that use Molex connectors. Repeat as necessary.
4. There are 2 cables with SATA connectors. Connect this connector to any of the SATA hard drives in your system. Repeat as necessary.
5. There are two connectors for PCI Express graphic cards. They are labeled PCI-E on the connector. Connect these to your PCI Express graphic card if needed. **Note:** Please consult the user manual supplied with your PCI Express graphic card for detailed usage instructions.
6. If you have a floppy drive, you will find the correct power connector at the end of one of the cables with 4-pin Molex connectors. Connect the female floppy power connector to your floppy drive.
7. Connect the power cord to the PSU.

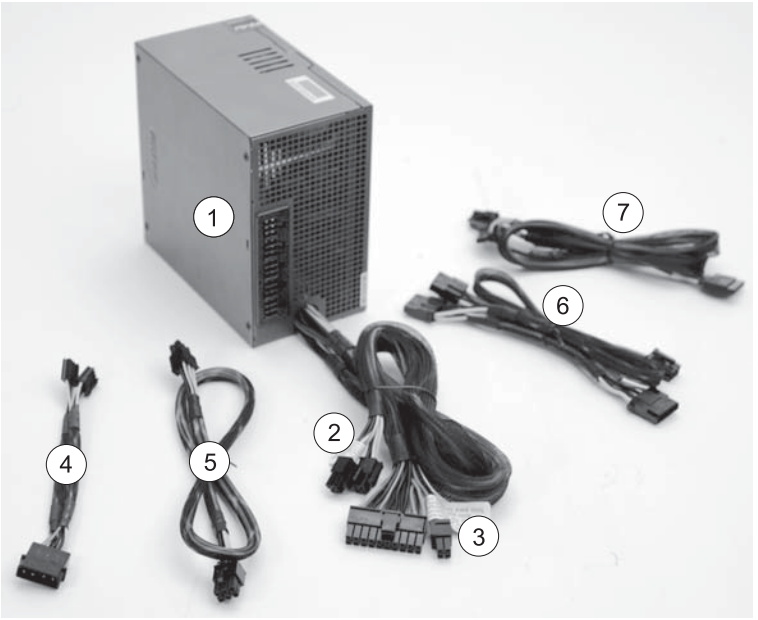
NeoPower 550 Power Supply (Sonata Plus 550 Model Only)

The NeoPower 550 PSU installed in the Sonata Plus 550 supports the newest ATX12V version 2.2 specification. This PSU includes Universal Input and Active Power Factor Correction (PFC). Universal Input allows you to connect your NeoPower PSU to any AC power outlet between 100～240V without having to worry about setting a voltage switch. Active PFC improves the power factor value of the PSU by altering the input current wave shape, helping the power plant provide power to users more efficiently.

Also included are a variety of industrial-grade protective circuits: OPP (over power protection), OVP (over voltage protection), SCP (short circuit protection), and UVP (under voltage protection).

Special Quiet Computing Fan Operation
NeoPower power supplies feature an innovative design that decreases noise during normal use, but which allows for superior cooling capabilities as loads increase. Owing to its ultra high efficiency and low heat generation, NeoPower can utilize an 80mm exhaust fan that rotates slowly and quietly to blow hot air out of the PSU, speeding up as heat increases.

Advanced Cable Management System
NeoPower power supplies feature Antec's Advanced Cable Management System. It allows you to use only the power cables that you need, thereby reducing clutter and improving airflow inside your case. Inside the package, apart from a power cord, you will find the following cables: (see picture 1)



Picture 1

Attached to the power supply, you'll find the following:
1. Five 6-pin output sockets, for use with the wire sets to power your drives and other peripherals.
2. 4-pin and 8-pin +12V connectors.
3. A 24-pin configurable main power connector with detachable 4-pin section for 20-pin applications.

Advanced Cable Management Wire Set (Modular Cables)
4. One Y-adapter with one standard 4-pin Molex peripheral connector at one end and two female Floppy power connectors at the other end.
5. Two sets of wires with a 6-pin PCI Express graphic card connector at one end and a 6-pin PSU connector at the other end.
6. Two sets of wires with three standard 4-pin Molex peripheral connectors at one end and a 6-pin PSU connector at the other end.

7. Two sets of wires with two SATA drive connectors at one end and a 6-pin PSU connector at the other end.
   Note: The SATA connectors include a +3.3V output so you can power the latest SATA devices.

Modular Cables:

#	Quantity	Part Name	Description
1-3	1	Power supply	Includes 24-pin main connector and a 4+4-pin +12V connector
4	1	14 cm Molex to Floppy connectors w/cable	Includes one Molex and two floppy connectors
5	2	60 cm PCI Express connector w/cable	Includes one PCI Express connector
6	2	77 cm Molex connector w/cable	Includes three Molex connectors
7	2	73 cm Serial ATA connector w/cable	Includes two Serial ATA connectors

Installation:

This PSU is backwards compatible to previous ATX specifications. To make sure you connect your PSU properly, please refer to the user manual supplied with your motherboard and peripherals before connecting the NeoPower to any of your devices.

1. Connect the 24-pin main power connector. If your motherboard uses a 20-pin connector, detach the 4-pin attachment on the 24-pin power connector (see pictures 2 and 3). **Note:** the detachable 4-pin section cannot be used in place of the 4-pin +12V connector.

Picture 2

For 24-pin motherboards

Picture 3

For 20-pin motherboards

2. Connect the 4-pin or 8-pin +12V connector as needed for your motherboard.
3. In the package, you will find 2 sets of power supply-to-peripheral Molex connectors. Connect the 6-pin connector to any of the 6 pin sockets on the PSU and connect the peripheral Molex connectors to your peripheral devices. Repeat as necessary.
4. In the package, you'll find 2 sets of power supply-to-SATA connectors. Connect the 6-pin connector to any of the 6-pin sockets on the PSU and connect a SATA connector to your SATA drives. Repeat as necessary.
5. In the package, you'll find one PCI Express graphic card connector. It's the only 6-pin connector with 3 yellow wires and 3 black ones. Connect the 6-pin connector to any of the 6-pin sockets on the PSU and connect the 6-pin PCI Express connector marked "PCI-E" to your PCI Express graphic card if needed. **Note:** Please consult the user manual supplied with your PCI Express graphic card for detailed usage instructions.
6. If you have a floppy drive, connect the Y-adapter to any of the Molex connectors and connect the female floppy power connector to your floppy drive.

7. Connect the power cord to the PSU.

Power Switch: Both the EarthWatts 500 and NeoPower 550 come with a main power switch. Make sure you turn the switch to the ON (I) position before you boot up your computer for the first time. In normal operation there is no need to turn the switch to the OFF (O) position since the PSU is equipped with a soft on/off feature, which turns your computer on and off through the soft switch on your computer case. You may need to turn the switch to the OFF position if your computer crashes and you cannot shut it down with the front panel switch.

Hard Disk Installation

This case offers two hard disk mounting options. Only use one mounting method at a time. If the case will be moved periodically, then the drives need to be secured to trays as described in the Tray Mount section. If you want the quietest possible installation and the system will not be moved around, then use the suspension system discussed in the Suspension Mount section.

Tray Mount

There is a hard disk cage right under the external 5.25" drive. You can mount four hard drives using the trays inside it.

1. Open the front bezel as described in Setting Up section.
2. Loosen the two thumbscrews. Swing open the fan cage and gently lift the cage upward to remove it. You will see four drive trays with soft silicon grommets inside the cage.
3. Squeeze the metal clips on each side of the tray and slide the tray out.
4. Mount your hard drive into the drive tray through the bottom silicon grommets with the special screws provided.
   Note: Don't over-tighten. Over-tightening the screws will harm the vibration and noise reduction qualities of the silicon grommets.
5. Slide and lock the tray back into the case.
6. Find the appropriate power connector on the PSU and connect it to the device.
7. Repeat this procedure for any additional drives you plan to install.
8. Put the front fan cage back onto the case. If you plan to mount the optional 92mm case fans, you should do it now. See the Cooling section for fan installation.

Suspension Mount

This is the ultimate hard disk mounting solution to reduce hard drive noise. There are three sets of suspenders inside the cage to mount three hard drives. Each hard drive needs two suspenders (front and rear) to mount.

Note: please DO NOT transport your system with your hard disks suspension mounted. The drives may slip from the suspenders causing damage to the hard drives and to other components inside the case.

1. Remove the trays from the cages. Store them in a safe place. You won't need them.
2. Twist the front suspender.
3. Insert the hard drive through the front suspender from the front.
4. Twist the rear suspender and guide the hard drive through it.
5. Adjust the hard drive position so it has al least 10mm clearance from the front 92mm fan (fan not included).
6. Find the appropriate power connector on the PSU and connect it to the device.

7. Repeat the same procedure for the other drives as necessary.
8. Put the front fan cage back to the case. If you plan to mount the optional 92mm case fans, you should do it now. See Cooling system section for fan installation.

5.25" Device Installation

There are four external 5.25" drive bays (one with 5.25" to 3.5" adapter). The top two drive bays come with a universal drive door that allows you to hide your optical drive behind the door.

1. Carefully remove the metal plate covering the drive bay.
2. Make sure the clip on the end of the drive rail is angled away from the device and facing forward. Put a plastic drive rail on each side of the 5.25" device. Use the rear set of the screw holes on the drive rails for the top two drive bays and use the front set of screw holes for the lower two drive bays.
3. Slide the device into the drive bay until you hear a click.
4. Mount the other devices accordingly.
5. Connect a large 4-pin connector from the PSU to the male 4-pin connector on each of the devices.

External 3.5" Device

To install a floppy or other external 3.5" device to the 5.25" to 3.5" adapter:

1. Slide the adapter out.
2. Place the drive to the adapter and fasten the drive with screws provided.
3. Find a 4-pin floppy power connector on the PSU and connect it to the male 4-pin connector on the devices.

Cable Organizer

There are six hooks (cable organizers) located at the back of the hard drive cage. Loop any long cables you have around the hooks to keep them tucked away. This will prevent tangles and improve airflow through the case. To get to the cable organizer you need to open the right side panel.

Cooling System

The TriCool™ fan:

The case includes one 120mm TriCool™ fan installed in the rear. This fan has a three-speed switch that lets you choose between quiet, performance, or maximum cooling. (See specifications below.) The fan is installed so that the air is blowing out of the case. Connect a large 4-pin connector from the PSU to the male 4-pin connector on the fan.

Note: The minimum voltage to start the fan is 5V. We recommend setting the fan speed to High if you choose to connect the fan to a fan control device or to the Fan-Only connector found on some of Antec's power supplies. A fan-controlled device regulates the fan speed by varying the voltage supplied to it. The voltage may start as low as 4.5 V to 5V. Connecting a TriCool™ set on Medium or Low to a fan-control device may result in the fan not being able to start. The already lowered voltage from the fan control device will be further reduced by the TriCool™ circuitry below 5V.

Specifications:
Size: 120 x 120 x 25.4 mm
Rated Voltage: DC 12V
Operating Voltage: 10.2V ~ 13.8V

Speed	Input Current	Air Flow	Static Pressure	Acoustical Noise	Input Power
High 2000 RPM	0.24A (Max.)	2.24 m^3 / min (79 CFM)	2.54 mm-H_2O (0.10 inch-H_2O)	30 dBA	2.9 W
Medium 1600 RPM	0.2A	1.59 m^3 / min (56 CFM)	1.53 mm-H_2O (0.06 inch-H_2O)	28 dBA	2.4 W
Low 1200 RPM	0.13A	1.1 m^3 / min (39 CFM)	0.92 mm-H_2O (0.04 inch-H_2O)	25 dBA	1.6 W

The Front 92mm Fan Mounts

You can install two 92mm fans into the fan cage in front of the internal 3.5" drives. These fans must be installed so that the air is blowing into the case. We recommend using Antec 92mm TriCool™ fans to balance quiet performance with maximum cooling. See our web site for product information.
Note: Please choose your fan speed wisely. In most cases, a medium or low speed setting will be enough to supply adequate cooling.

The Washable Air Filter

There is a washable air filter attached to the front of the 92mm fan cage. From time to time it will be necessary to wash the installed air filter. Not washing the air filter will result in higher system temperatures and possible stability problems.
We recommend checking the air filter at least once a month initially.
The frequency will change depending on system usage (users whose systems run 24/7 will likely have to check/wash more often than those who don't use their systems every day) and on environmental conditions.

Antec, Inc.
47900 Fremont Blvd.
Fremont, CA 94538
USA
tel: 510-770-1200
fax: 510-770-1288

Antec Europe B.V.
Stuttgartstraat 12
3047 AS Rotterdam
The Netherlands
tel: +31 (0) 10 462-2060
fax: +31 (0) 10 437-1752

Customer Support:
US & Canada
1-800-22ANTEC
customersupport@antec.com

Europe
+31 (0) 10 462-2060
europe.techsupport@antec.com

www.antec.com

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